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| 10/669,403 | 09/24/2003 | Viacheslav A. Petrov | UC0315 US NA | 5058 |

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E I DU PONT DE NEMOURS AND COMPANY
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WILMINGTON, DE 19805

| EXAMINER |
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VIJAYAKUMAR, KALLAMBELLA M

| ART UNIT | PAPER NUMBER |
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1751

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,403

Applicant(s)

PETROV ET AL.

Examiner

Kaliambella Vijayakumar

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15,22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's arguments filed 07/07/2006 have been fully considered and not persuasive to overcome the rejection of claims cited in the last office action.
- Claims 15, 22 and 23 are currently pending with the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Babb et al (US 5,730,922).

This rejection was maintained in the last office action for the reasons stated therein and being recited in the present office action.

The prior art teaches a composition comprising: (a). Monomers/prepolymers of the structure $CF_2=CF-X-R-(X-CF=CF_2)_m$, wherein m=an integer from 1-3; X= O-atom or a perfluoroalkylene ether; and R=aromatic and substituted aromatic, with C_1 - C_{12} atoms and a molecular weight from 14-20,000, and (b). barium ferrite or iron oxide or titania < semiconductor/active material>, which are applied to a surface by solution deposition or Langmuir-Blodgett technique (Col-4, Ln 51- Col-5, Ln 5; Col-5, Ln 45-Col-6, Ln 10; Col- 14, Ln 30-40; Col-15, Ln 12-43). All the limitations of the instant claims are met.

The reference is anticipatory.

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2. Claims 15 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Poetsch et al (US 5,196,140).

The use of phrase "for depositing an active material on to a surface" in the claims have not been treated with patentability. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Poetsch et al teach an electro-optical liquid crystal display element comprising at least two liquid-crystalline components (active materials) and a perfluoro-compound such as 4-methyl-1-(1,1,2,2-tetrafluoroethoxy)-benzene (Abstract, Col-17, Ln 39-48; Col-20, Ex-7; C-21, Ex-9). All the limitations of the instant claims are met.

The reference is anticipatory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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1. Claim 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Poetsch et al (US 5,196,140).

Poetsch et al teach an electro-optical liquid crystal display (LCD) element comprising a dielectric comprising a perfluoro compound such as 4-methyl-1-(1,1,2,2-tetrafluoroethoxy)-benzene and at least two liquid-crystalline components (active material) (Abstract, Col-17, Ln 39-48). The prior art further teaches the perfluoro compounds with the formula R1-A2-R2 (Formula 1b), wherein R1 and R2 are C2-C12 alkyl or alkoxy groups, and at least one of R1 and R2 being a C1-C15 perfluoro-alkyl and A2 being a phenyl group in the composition (Col-2, Ln 46-Col-4, Ln 6; Col-5, Ln 27-Col-8, Ln 68; Col-17, Ln 39-48), and its advantages with clear point of the liquid crystal display without the need of viscosity modifiers (Col-2, Ln 10-23).

The prior art fails to disclose the specific perfluoro compounds in the LCD composition.

It would be obvious to a person of ordinary skill in the art to optimize the LCD element of the prior art by substituting the alkyl group in the perfluoro containing dielectric composition with an alkoxy group to benefit from better functionality of the LCD element with improved clear point, because the prior art teaches that the LCD dielectrics could be modified to suit the application needs by altering dielectric anisotropy or viscosity (Col-16, Ln 31-55). The LCD dielectric composition containing compounds taught by the prior art containing the specific alkoxy groups show structural similarity with the instant claimed composition, and have similar utility as electro-optic compounds, wherein the composition in instant claim 22 is prima facie obvious over the compositions of Poetsch.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claims 15 and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/669404. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are drawn to compositions containing an active material and specific substituted perfluoro-aromatic compounds, while the claims in copending application are drawn to a solution containing organic active materials that are encompassed by active materials and specific substituted perfluoro-aromatic compounds that are similar, and the presence of a solvent in the coating composition per the copending application would be obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicants have not responded to the maintaining of rejection of claim-15 over Babb et al Reference (US 5,730,922) in the last office action, and the response is recited again. Applicant's argument that the prior art does not teach the use of monomers in combination with an active material as required by the instant claim limitation is not persuasive (Response: 1/06, Page-6) because, the prior art teaches use of monomers/prepolymers (Col-14, Ln-60-65; Col-15, Ln 57-61) and the semiconducting oxides such as copper oxide, titania, potassium titanate and barium titanate (Col-13, Ln 33-36; Col-15, Ln 30-35) <active materials> in the composition that meets the limitation of instant claimed composition. Further, applicants define the active materials to include electrically conductive and semiconductive materials (Specification: Page-3, Para-1). Claim-15 fails to patentably distinguish over by Babb et al (US-922).

Applicant's arguments filed 07/07/2006 have been fully considered and they are not persuasive to overcome the rejections over Poetsch Reference (US 5,196,140) cited in the last office action. In response to applicant's argument that liquid crystalline components are the base dielectric material in Poetsch disclosure and not an active material (Response, Pg-6, Ln 8-10, 22-24), the prior art composition is identical to that by the applicants and its functionality is not the limitation of the instant claim.

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In response to applicant's argument that the "base materials"/LC-materials offer short switching times (Response, Pg-6, Ln 14-20), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that Poetsch does not disclose a liquid composition of an active material (Response, Pg-6, Para-5; Pg-7, Ln 13-16), it is not the limitation of the instant claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, Poetsch's disclosure Example 7 (C-20) discloses a solution of the components.

In response to applicant's argument that Poetsch (US-5,196,140) is nonanalogous art wrt to claim-22 (Response, Pg-7, Ln 4-5), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Poetsch teaches electro-optical LCD element comprising the composition that is analogous to the applicant's invention.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., applicant's layers such as light emission/charge transfer (Response, Pg-7, Ln 18-21) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For the reasons set forth above, the instant claimed compositions fail to patentably distinguish over the prior art compositions.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 8.30-6.00 Mon-Thu, 8.30-5.00 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KMV
September 11, 2006.


DOUGLAS MCGINTY
SUPERVISORY PATENT EXAMINER

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